

THE AUK:

A QUARTERLY JOURNAL OF

ORNITHOLOGY.

VOL. VII.

OCTOBER, 1890.

No. 4.

ON BIRDS OBSERVED AT THE DRY TORTUGAS,
FLORIDA, DURING PARTS OF MARCH
AND APRIL, 1890.

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THROUGH the kind permission of Dr. John B. Hamilton, Surgeon General of the Marine Hospital Service of the United States, I was allowed to make my headquarters for ornithological work at the Key West Quarantine Station on Garden Key, Dry Tortugas, Florida, during the past spring. I had planned an ornithological exploration along the Gulf coast of Florida, from Tarpon Springs south to Cape Sable and through the more important keys lying off the south coast of the peninsula from Bahia Honda westward. The field is a large one to cover even in a superficial manner, and after some work in the region about Cape Sable and adjacent keys, I proceeded to Bahia Honda and thence through the group of keys westward to Key West, where some three weeks were spent. Here I found that through the kindness of Capt. Bendire and Prof. G. Brown Goode, of the Smithsonian Institution, the Secretary of the Treasury of the United States had placed at my disposal the U. S. Revenue Cutter 'McLane,' Captain Munger in command, to convey myself and assistants to such points as I might desire to investigate.

I wish in this connection to express my thanks publicly to these gentlemen as well as to Professor Langley of the Smithsonian Institution, and to Dr. Murray, Surgeon in charge U. S.

Marine Hospital at Key West, and to Dr. Geddings, Surgeon in charge Key West Quarantine Station, Garden Key, Dry Tortugas, Florida, for their many kindnesses in facilitating the scientific work I had undertaken. To Capt. Smyth who succeeded to the command of the revenue cutter during the period of my work, I am under special obligations for the many courtesies shown me, and for very substantial aid rendered to the work I had in view.

The use of the revenue cutter saved much time in getting from Key West to the Tortugas, and as my entire party and collections were returned directly to the Anclote Keys by this vessel, much time was devoted to observing and collecting that would otherwise have been employed in sailing between these points. So on March 19 I sent the 'sharpie,' on which I had cruised from Tarpon Springs to Key West, back to the former point and embarked with two assistants on board the cutter which landed us at Garden Key, Dry Tortugas, the same afternoon.

The Dry Tortugas consist of a group of irregular, low, sand and coral islands, six in number, which are some sixty miles west of Key West, in north latitude $24^{\circ} 35'$ and west longitude $82^{\circ} 50'$, approximately. The only land between Key West and the Tortugas is the group of keys known as the Marquesas, and these keys are a little less than twenty miles west of Key West. So the nearest land to the Tortugas is rather more than forty miles away. The nearest mainland is Cape Romano, Florida, about 140 miles distant; and the Island of Cuba is, at its nearest point, about 90 miles distant. The coast of Yucatan is some 350 miles southwest, and directly to the westward in a straight line is the Mexican coast, about 750 miles away. So that this small group of little islands is very much isolated from any adjacent land, and all birds visiting it must pass over considerable distances of open sea.

The first island of the group to the eastward is known as East Key. It is a low, sandy, coral island, covered in parts with stunted bushes, and contains an area of perhaps eighteen acres. The two keys succeeding it are known as Middle Key and Hospital Key. They are both very small and are little more than sand banks protruding from the water, sparsely growing coarse grass and some low, stunted bushes being the only relief from total barren-

ness. Middle Key is rather more than a mile west of East Key, and in the same direction Hospital Key is about a mile from Middle Key. Southwest of Hospital Key and a mile from it is Garden Key, the centre of the group, and the most important of the islands, though by no means the largest. It is nearly circular, and the walls of Fort Jefferson originally extended to the water's edge entirely round the island. Now a considerable point of land has been formed to the south, and a like point to the north, outside of the walls by the action of the tide currents. There are perhaps altogether outside the walls three acres of land built up in this way in the past thirty years, and coarse grass, beach ivy, and some low bushes, make these areas quite green and agreeable to look at. The walls, which are about sixty feet high, inclose an area of some thirteen acres, at least three of which are occupied by buildings of a substantial character, and there is a harbor light on the east wall. So that nearly ten acres inside the fort are open space. Most of this is grown up with grass and beach ivy, but in one corner of the enclosure is a little grove of button-wood trees of perhaps half an acre in extent, and scattered over the rest of the area are about forty cocoanut palms and a few other button-wood trees. The trees in the grove and the others scattered about are all of fairly good size, but none are more than fifty feet high. There is no natural spring of fresh water at present on this or any other island of the group, but on this key are enormous cisterns of great capacity, which are replenished from the roofs of buildings and the tops of the walls of the fort. None of the water in these cisterns, however, is accessible to birds, as all are carefully covered or are under ground. This enclosure which I have thus briefly sketched was, I found, by far the most attractive point for land birds and the list that will presently be presented was practically made here.

About three quarters of a mile to the westward and a little south of Garden Key, is a small key, oval in shape and of perhaps eight acres in area. It is known as Bird Key. Here the different Gulls and Terns breed in myriads, those which are ground nesters finding room between and *under* the bushes in which the Noddies (*Anous stolidus*) build countless nests. But of this more presently.

Loggerhead Key, the extreme westerly island of the group, is a long island similar in character to those already described, but

larger. Near one end of it is a light-house of the first order and near it are the keeper's quarters and buildings, surrounded by some cocoanut palms, and a few scrubby button-wood trees. The usual low bushes are abundant, but, so far as I am aware or could learn, no birds breed at this point, though the superficial area of the island must be at least twenty acres and it seems admirably adapted to the breeding wants of Terns and the like.

After a careful study of all of these islands, supplemented by close questioning of the lighthouse-keepers and the sergeant who has been in charge of the government property at Garden Key for the past five years, I have arrived at the general conclusions: (1) That no land birds breed on any of the keys of the group. (2) That the stay of any land birds is of very short duration save on exceptional occasions which I shall have reason to allude to in more detail presently.

The migrations of the land species which I observed during my stay always coincided with the approach or occurrence of some pronounced aerial disturbance, and the advent of a strong north or northwest breeze always meant a very perceptible, and generally a marked, accession of the bird visitors. This applies to land birds in the main, and was not remarked regarding water birds, except in the case of the Herons, which will be noticed in detail further on. It seems probable that the flight of land birds was at this time of year quite constant and that the northwest winds arrested this flight and so increased the number of birds on the keys.

My stay at Garden Key was limited, and I left there on April 10. The following list includes all the birds that were observed up to that date and the records of several others, and notes regarding their occurrence, made by Dr. F. S. Goodman, of the U. S. Marine Hospital Service, stationed at the Quarantine Station on Garden Key. This gentleman kindly consented to carry on some work for me after my departure. In all cases he has forwarded to me the birds secured, together with the date of capture, etc. My thanks are due to him for this aid and in all instances I include his name in connection with information which he has furnished.

The list of birds observed at the Tortugas includes eighty species and though it will undoubtedly be greatly added to, yet enough land birds are present, fifty-seven species in all, to point apparently to the following conclusions.

That the birds of the Florida peninsula that have become specialized so as to present tangible characteristics of appearance, etc., are not migratory in a large sense, but are restricted to comparatively limited areas. Examples may be cited, such as *Vireo noveboracensis maynardi* and *Geothlypis trichas ignota*, which are represented on these keys during the times of migration by their closely allied representatives, which I take it are migratory species in a broad sense. There are many species of Woodpeckers on the peninsula, but none are to be considered as migratory save *Sphyrapicus varius*, which occurs, as has been shown, quite commonly on these keys and was the only species of Woodpecker observed. No Wrens were observed, yet as near as the Cape Sable region *Thryothorus ludovicianus mianensis* is common. On the adjacent mainland of the Florida peninsula *Cardinalis cardinalis*, *Pipilo erythrophthalmus alleni* and *Cyanocitta cristata florincola* are more or less abundant and are all of them common species that are not migratory and are not represented in the fauna that has been considered. All of the species of land birds observed at the Tortugas are migratory in the fullest sense, and the only specialized form noticed that is a breeding bird on the mainland, *Chordeiles virginianus chapmani*, is the only specialized race of Florida bird that seems the exception to the conclusion that the breeding birds of the Florida peninsula cannot be regarded as migratory species. Negative evidence in support of this conclusion seems to be furnished by the fact that almost every land species well known as a migrant on the mainland was observed during the time, about two months in all, that observations were carried on at the Dry Tortugas.

Further, it will be noticed that the tendency to representation of western races is marked. This is well illustrated in the case of *Dendroica dominica albilora* and *Dendroica palmarum*. The first bird is almost unknown on the mainland, but out of a series of eight Yellow-throated Warblers obtained, six are well-marked representatives of *D. d. albilora*, and though upward of twenty Palm Warblers are included in the birds taken at the Tortugas, only two are referable to the eastern race *hypochrysea* which is not at all rare in the region about Tarpon Springs.

1. *Larus argentatus smithsonianus*. HERRING GULL.—Rather common, especially during the earlier part of my stay.

2. *Larus atricilla*. LAUGHING GULL.—Rather common resident, and some birds undoubtedly breed at this point.

3. *Sterna maxima*. ROYAL TERN.—The commonest representative of the family. All of the individuals examined were moulting, or had almost completed the spring moult. The majority had assumed, or were assuming, the black cap of the adult; but at least twenty per cent, though their moult had taken place, remained in a phase similar to that of winter adult birds. About April 5 the moult was completed and, though the birds were still in flocks, mating in at least some cases had begun. The birds are known at this point as 'Redshanks,' and I am told that many breed here. The moult was in all cases complete, including the primary quills and tail-feathers.

4. *Sterna antillarum*. LEAST TERN.—These birds were not observed during my stay, but Dr. Goodman obtained them commonly in late April and early May, and they breed, I should judge, rather commonly. They are known by the egg hunters who resort to this point as 'Sandpeters.'

5. *Sterna fuliginosa*. SOOTY TERN.—This is another species that had not arrived at the Tortugas up to the time of my departure. Dr. Goodman, however, found that they arrived about the same time as the Noddies, but were, though plentiful, not so abundant as that species. They breed here in numbers, laying soon after their arrival, and are known to the egg hunters as the 'Egg Bird,' their eggs being more esteemed for food than those of the other Terns breeding here. Their breeding ground, as near as I could ascertain, is restricted to East Key and to Bird Key.

6. *Anous stolidus*. NODDY.—An abundant breeding species at the Tortugas, being mainly confined to Bird Key as a breeding place, and nesting in the low bushes. So far as I could learn, the birds are not residents at this point and I only observed three during my stay. This was one day late in March. They, with the Sooty Terns, appeared on April 20 in large numbers, but only remained two days, when, after inspecting their breeding grounds, all departed, to return about a week later in greatly increased numbers, when breeding was almost at once commenced. They leave, I am told by the people familiar with the region, early in the fall and are not seen, except an occasional one, till the following spring.

All of the Gulls and Terns that breed at the Dry Tortugas have been much diminished in numbers in the past ten years. It has always been the custom for some of the boats engaged in fishing and sponging about Key West to resort to these islands during the breeding season, and lately their depredations have really made a very appreciable difference in the birds that resort to this breeding ground. I am told that the eggs have a commercial value as an article of food in the markets of Key West, where barrels of birds' eggs from the Tortugas are brought every season of late years.

7. *Rynchops nigra*. BLACK SKIMMER.—The sergeant in charge of the government property on Garden Key showed me the head of one of

these birds. He had secured it a year or two ago, and it was the only one of the kind he had seen during a stay of five years at Garden Key.

8. *Sula sula* BOOBY.—A few Boobies were observed during my stay, but none secured. I believe them to have been this species. Later, on April 19, Dr. Goodman procured one which he sent to me. I am told by all the old sailors and sponge fishermen who have been familiar with this region for years, that formerly the Boobies were abundant, and bred and roosted in great numbers on East Key. They were very tame, and could be readily killed with sticks, and being much liked for the pot, have been gradually diminishing in numbers, till now it is unusual to see these birds, except out at sea or perched on some buoy that marks the passages through the outer reef. Mr. Atkins, while repairing the Key West and Cuban cable, in March and April, 1890, saw Boobies not at all uncommonly, and told me that, whenever they were obliged to mark any part of their work with buoys, on returning to such a point Boobies were almost always to be seen taking advantage of these roosting places. The birds were very tame and could be easily approached; but none were secured, as time did not permit.

9. *Phalacrocorax dilophus floridanus*. FLORIDA CORMORANT.—This species is apparently rare at the Tortugas. I learned from good authority that they were occasionally seen. None were observed by myself or party during our stay.

10. *Pelecanus fuscus*. BROWN PELICAN.—A few were observed every day during my stay, and their numbers were occasionally increased so that the birds were noticeably common. They were for the most part in the gray phase, and but few birds in breeding plumage were noticed. They do not breed at this point, but from reliable men I learn that there is a large breeding rookery of both these birds and Florida Cormorants on one of the keys of the Marquesas group.

11. *Fregata aquila*. MAN-O'-WAR-BIRD.—Noticed every day during my stay. They did not seem to come to this point for food, as they were rarely seen fishing for themselves or chasing the Terns for food. But almost every day about noon a party of from four to twenty of these birds came to Garden Key and, attaining a point just above the Harbor Light Tower on the northeast wall of the fort, they would begin to soar in what seemed a sort of way of resting. The circles were of about one hundred feet diameter; the flight very regular, slow and monotonous, with no apparent motion of the wings for hours. It tired one to look at them. They would keep this up till after dark at night; at least they were to be seen as long as there was light to distinguish them, and on one moonlight night, not long before I left the Tortugas, at eleven o'clock I saw five of these wonderful flyers still soaring high above the light tower. It must not be thought that one of these birds came and that another went away and that so the appearance of tireless soaring was carried on. They came and went away in parties, and solitary individuals were exceptional. They are said to greatly increase in numbers about the time the young Terns and Noddies are hatched, and to persecute the old birds bringing

food to their young. This I can readily believe, as such is their habit about Brown Pelican and Cormorant rookeries at like seasons. At the time referred to, I am told, they roost in great numbers on East Key.

12. *Ardea wardi*. WARD'S HERON.—A large Blue Heron, which was presumably this species, was observed on a single occasion, feeding on the beach of Bird Key.

13. *Ardea cœrulea*. LITTLE BLUE HERON.—A number of representatives of this species was observed on Garden Key. Individuals in both phases of plumage were taken. It was novel to see the birds adapt themselves to new conditions. I frequently saw this species and *Ardea virescens* alight in the embrasures of the fort, and to escape pursuit they would, instead of flying over the walls of the fort, dodge into one cannon port and out of another, with great success, easily avoiding any one, and becoming quickly lost to the hunter in the mazes and corridors at different levels.

14. *Ardea virescens*. GREEN HERON.—Plentiful on Garden Key during my stay, and Dr. Goodman collected some ten or fifteen individuals in the three weeks succeeding my departure. I have never seen Green Herons in the same abundance that I found them here. There were always several fishing in the moat outside of the walls of the fort, and I rarely passed through the little buttonwood grove inside of the fort without disturbing one or two roosting in these trees. I do not think that this or any other kind of Heron breeds in this group of islands, and regard all representatives of the family found here as nomadic. Their numbers generally increased just before the beginning of strong northerly winds.

15. *Nycticorax nycticorax nævius*. BLACK-CROWNED NIGHT HERON.—Dr. Goodman sent me a single representative of this species which he procured late in April.

16. *Nycticorax violaceus*. YELLOW-CROWNED NIGHT HERON.—During the time spent at the Tortugas five representatives of this Heron were obtained. All were adult, and in fine, unworn plumage. In the vicinity of Key West the low mangrove keys seem to be particularly adapted to the wants of the Yellow-crowned Night Heron, and the birds are abundant. I found them breeding, and with young just hatched, as early as March 5.

17. *Gallinula galeata*. FLORIDA GALLINULE.—I found on Middle Key a mummied specimen of this bird. No others were met with.

18. *Tringa minutilla*. LEAST SANDPIPER.—A single one taken, and no others observed. Dr. Goodman took one on April 25.

19. *Calidris arenaria*. SANDERLING.—Two small flocks were seen frequently during my stay and some seven or eight secured. These were the commonest shore birds.

20. *Actitis macularia*. SPOTTED SANDPIPER.—I obtained a single individual during the last day or two of my stay. Dr. Goodman found them to be a quite common bird late in April and early in May, and he sent me a large series which he had collected at that time.

21. *Ægialitis semipalmata*. SEMIPALMATED PLOVER.—A single one was taken on April 22 by Dr. Goodman.

22. *Ægialitis meloda circumcincta*. BELTED PIPING PLOVER.—A single individual of this subspecies was secured on March 27. It is a male.

23. *Arenaria interpres*. TURNSTONE.—A small flock of perhaps ten or twelve of these birds was frequently seen during my stay, and a few representatives were secured.

I had expected to find at the Dry Tortugas many water birds,—that is, great flocks of Gulls and Terns and Plover and Sandpipers; and it would seem an ideal place for all these kinds of birds. The falling tide exposes much reef that seems fairly to swarm with minute marine animal life, and the sand beaches reach down to such shoal water that in many places it is almost impossible to land a boat save on extreme high tide. Small fish could be seen in great schools in the areas of shoal water and it appeared to be altogether just the place for myriads of Gulls. But the kinds of Gulls and Terns that were noticed during my stay were not represented by large numbers of individuals, and the beach birds were insignificant. The list of water birds that I have presented only includes twenty-three species; and of these seven were added to the list by Dr. Goodman after my departure, so that *sixteen* species of water birds, represented by but comparatively small numbers of individuals, were all that were seen at the Dry Tortugas between March 20 and April 10,—a period of three weeks.

But if water birds were not where I had hoped to find them, land birds were present in numbers; and it was with increasing surprise that each day of my stay discovered some unlooked-for species that, in planning my trip to these islands for Noddies and rare Terns, for Boobies and perhaps some water wanderers among the Petrels, were not even thought of. The result of the collections and observations produces a little over fifty land birds, two of which were before unrecorded from North America. (See Auk, Vol. VII, No. 3, pp. 264-265.) This is perhaps the more remarkable when I reiterate that so far as my own observation goes and from all that I could gather from other sources not a single land species breeds on any of these keys.

24. *Accipiter velox*. SHARP-SHINNED HAWK.—Dr. Goodman sent me an adult female bird which he procured on May 1. This is the only record I have.

25. *Buteo lineatus alleni*. FLORIDA RED-SHOULDERED HAWK.—A single representative of this species visited Garden Key during my stay. I was unable to procure the bird, but had good opportunities to examine it with a glass.

26. *Falco peregrinus anatum*. DUCK HAWK.—A single bird was observed on one occasion on Bird Key and a pair soared round above the fort for an hour or more one afternoon about April 1.

27. *Falco columbarius*. PIGEON HAWK.—I secured one and saw several pass over the fort during the last few days of my stay. Later in April Dr. Goodman procured me a series of six of these birds, among which are two individuals that are moulting and one in a phase between the immature and adult plumage.

28. *Falco sparverius*. AMERICAN SPARROW HAWK.—Some dozen or more individuals were observed during my stay, and several were taken. They are said to be resident at Garden Key, *i.e.*, there are always some representatives present, but I could find no signs of their having nested on the island or on the others of the group, and so believe that while they may be always represented in the bird fauna of the island, yet it is by different individuals passing some little time at this point.

29. *Pandion haliaëtus carolinensis*. AMERICAN OSPREY.—A single one was noted.

30. *Coccyzus americanus*. YELLOW-BILLED CUCKOO.—This species was not common, but I obtained one on the 7th and another on the 9th of April. Dr. Goodman collected four individuals, April 28–30.

31. *Ceryle alcyon*. BELTED KINGFISHER.—There were one or two representatives of this species present on Garden Key during my stay, but the birds were never noticed as being at all common. But their numbers were greatly augmented during the later part of April, for Dr. Goodman sent me a large series which he secured at that time.

32. *Sphyrapicus varius*. YELLOW-BELLIED SAPSUCKER.—This was the only Woodpecker observed at the Tortugas, where it was not uncommon during my stay. In all I secured six representatives, the first on March 25 and the last on April 8; five of these are females. The only male noticed was taken on March 25 and approaches the subspecies *nuchalis*, having a few red feathers faintly representing the nuchal band. The bird is also of a decidedly deeper and brighter yellow below than average specimens of typical *varius*.

33. *Antrostomus carolinensis*. CHUCK-WILL'S-WIDOW.—A single bird (a male) was secured on April 8, and Dr. Goodman sent me three, two of which were taken April 19, and one May 1.

34. *Chordeiles virginianus chapmani*. FLORIDA NIGHTHAWK.—I obtained a Nighthawk on April 5, and Dr. Goodman took two others on April 13 and 14 respectively, all of which I refer to this subspecies.

35. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD.—On the 24th of March I noticed several male birds, which were the first I had seen at this point. Two of these were seen half a mile from the shore, as they passed by the open boat in which I went from one key to the other. From this time they were more or less common till the 29th, when the migration seemed to be at its height and I took seven adult males. After about April 2 I did not see any. Only one female was noted during my stay. The adult males were, however, as abundant, if not more so, than I ever noted them at any point on the mainland in the spring migration. It was very curious to meet these birds, when at considerable distance from land. Frequently while fishing and collecting

water birds I noticed Hummingbirds that were always identified, when close enough to be seen plainly, as this species. One morning I counted six pass by the boat in this way. At such times their flight was direct and very rapid, and all were going in a northerly direction. They flew about twenty-five feet above the water and did not appear in any way fatigued, nor show any desire to alight on the boat, as small birds crossing the water so frequently do. The individuals taken on Garden Key, a dozen or more in all, were in superb plumage and good condition. They fed on cultivated flowers, that had been planted near some of the houses, and seemed as much at home as in our northern flower beds.

36. *Tyrannus tyrannus*. KINGBIRD.—This was by far the commonest land bird met with at the Tortugas. I should think that the first individuals of the migration arrived about the time that we came to Garden Key. For a day or two not many were seen. But one evening just about sundown I noticed at least fifty coming into the enclosure of the fort over the walls. From this time, about March 25, until we left they were very abundant. Generally on any dead limb or on the tops of the trees at least four or five, and not infrequently a dozen, were to be seen. Once I counted twenty-three individuals in one tree at the same time. The birds remained common during our stay and Dr. Goodman took them in numbers all through April, and secured examples as late as May 2.

37. *Tyrannus dominicensis*. GRAY KINGBIRD.—On March 23 I secured two individuals on Garden Key, but one was very badly mutilated and was not preserved. These were all the Gray Kingbirds that I met with during my stay. In the latter part of April they came to the Tortugas in numbers, and Dr. Goodman sent me many individuals taken during the first week in May.

38. *Corvus americanus floridanus*. FLORIDA CROW.—No Crows were secured by me at the Tortugas, but two birds that I saw and heard one day near East Key I refer to this subspecies.

39. *Dolichonyx oryzivorus*. BOBOLINK.—Not met with during my stay, but Dr. Goodman secured two on April 30 and another on May 1, all adult males.

40. *Icterus spurius*. ORCHARD ORIOLE.—Dr. Goodman sent me one, an adult male in full plumage, which he took on April 11.

41. *Ammodramus sandwichensis savanna*. SAVANNA SPARROW.—A few of these birds were found on Bird Key during the first ten days of my stay, but later none were taken and presumably all had gone north.

42. *Ammodramus savannarum passerinus*. GRASSHOPPER SPARROW.—A single bird was secured on April 7.

43. *Piranga rubra*. SUMMER TANAGER.—Dr. Goodman sent me an adult male which he procured late in April.

44. *Piranga erythromelas*. SCARLET TANAGER.—I saw one on Garden Key, at two different times during the 29th of March. The bird was very shy, and I was unable to secure it. The next day it was gone.

45. *Petrochelidon fulva*. CUBAN CLIFF SWALLOW.—For records of the occurrence of this species at Garden Key, see Auk, Vol. VII, No. 3, p.

264. Among a flock of Tree Swallows (*Tachycineta bicolor*) that visited Garden Key on March 29 I saw an individual of this species which I was unable to obtain. This was after the capture of the two individuals already recorded.

46. *Chelidon erythrogaster*. BARN SWALLOW. — A single bird was observed, but not procured, on April 8. This was the only note during my stay, but Dr. Goodman took two on April 20, which he sent to me.

47. *Tachycineta bicolor*. TREE SWALLOW. — Not common at the Tortugas during my stay. A small flock made its appearance on March 29 and remained near by all that day and part of the next. There were in all about a dozen birds, two of which were taken. This is the entire record for the species, and is given in detail as it bears strongly, by a process of exclusion, on other Swallows observed.

48. *Calichelidon cyaneoviridis*. BAHAMAN SWALLOW. — For a note on the capture of this species, see Auk, Vol. VII, No. 3, p. 265. Another individual of the same species was seen the same day flying about over the enclosure of the Fort, but was not secured. The bird is so easily recognized when on the wing, as not to be readily confounded with any other species.

49. *Vireo altiloquus barbatulus*. BLACK-WHISKERED VIREO. — Dr. Goodman took a single representative on April 29. I did not meet with the species.

50. *Vireo olivaceus*. RED-EYED VIREO. — During my stay on the Tortugas I secured a single bird on March 23 and two others on the 29th of that month. These are all the records.

51. *Vireo flavifrons*. YELLOW-THROATED VIREO. — A single one was taken at Garden Key on March 24.

52. *Vireo noveboracensis*. WHITE-EYED VIREO. — At Garden Key I secured three Vireos that are undoubtedly to be referred to this species. It would seem natural to expect to find the representatives of the White-eyed Vireo at the Tortugas the same as at Key West. I had just come from that island and had there collected a large series of birds—upwards of fifty—that were all unquestionably *Vireo noveboracensis maynardi*, so that the material that I have has enabled me to substantiate conclusions already advanced in this journal. (See Auk, Vol. VII, No. 1, pp. 15-16.) I am now inclined to believe further, that the White-eyed Vireos breeding on the west coast of Florida, from at least Tarpon Springs south, are not migratory birds and change their location but little at any season. This being the case it would not be natural to expect to find the subspecies *maynardi* at the Tortugas, if, as I believe fully, no land birds breed at that point. The White-eyed Vireos that are the resident breeding birds at Tarpon Springs are not as extreme examples in the direction of *crasirostris*, structurally, as those collected at Key West; but they have as a whole so far diverged from true *noveboracensis*, that they appear to me referable to *maynardi* rather than to the former, and are in much the same category as the Carolina Wrens of the Tarpon region, which, while not as extreme as *miamensis*, yet diverge so far from true *ludovicianus* in the direction of *miamensis* as to be referable only to that form.

53. *Mniotilta varia*. BLACK-AND-WHITE WARBLER.—This was one of the commonest birds at the Tortugas during my stay, and was found there by Dr. Goodman as late as April 28. On March 23 the birds were particularly abundant at Garden Key.

54. *Protonotaria citrea*. PROTHONOTARY WARBLER.—This species was met with but once on Garden Key. An adult male flew into an open window on April 6.

55. *Helinaia swainsonii*. SWAINSON'S WARBLER.—Three individuals were obtained on Garden Key during my stay. A male was procured on March 25, and another flew in at an open window the next day. A female was taken on April 5 concluding all records of the species at this point.

56. *Helmitherus vermivorus*. WORM-EATING WARBLER.—Two males taken on April 5 are all that were recorded during my stay. Dr. Goodman obtained a single bird on April 13.

57. *Helminthophila bachmani*. BACHMAN'S WARBLER.—A male taken on March 26 and a female taken on April 9 comprise all the records that were made of this species on the Dry Tortugas.

58. *Helminthophila pinus*. BLUE-WINGED WARBLER.—Three were taken on March 23, and one each on March 24 and 25,—five individuals in all.

59. *Compsothlypis americana*. PARULA WARBLER.—A few were noted and taken on the different keys during my stay. The birds were most abundant March 24 and 25 on Garden Key.

60. *Dendroica tigrina*. CAPE MAY WARBLER.—I took a single bird on April 8, and Dr. Goodman obtained one on the 27th of that month.

61. *Dendroica cærulescens*. BLACK-THROATED BLUE WARBLER.—Dr. Goodman obtained one on April 24. I did not meet with the species.

62. *Dendroica coronata*. MYRTLE WARBLER.—The only one observed, a female, was taken on Garden Key March 31.

63. *Dendroica cærulea*. CERULEAN WARBLER.—The only one recorded, an adult male, was taken in the low bushes on Bird Key, March 23.

64. *Dendroica striata*. BLACKPOLL WARBLER.—Dr. Goodman took two of these birds, one on the 26th and the other on the 28th of April. I did not meet with them.

65. *Dendroica dominica*. YELLOW-THROATED WARBLER.—Three Warblers of this kind were taken on the different keys of the group. The records are a male, March 23; a male, March 29; and a female, April 8. These birds are all well marked and typical specimens.

67. *Dendroica dominica albilora*. SYCAMORE WARBLER.—Six examples of this subspecies were obtained on the keys of the group during my stay. All are very strongly marked and are to be easily selected at a glance from the true *dominica*. The records of this subspecies for Florida are, so far as I know, confined to the single bird taken by Mr. J. W. Atkins at Key West (see Auk, Vol. VII, No. 1, p. 20). There are no records that I am aware of for the mainland of the peninsula. It is not a little remarkable that the western form of a bird should be so well represented in the migratory season on the extreme western land off the Florida coast.

68. *Dendroica virens*. BLACK-THROATED GREEN WARBLER.—Dr. Goodman obtained a single specimen on April 26.

69. *Dendroica palmarum*. PALM WARBLER.—This was the commonest Warbler at the Tortugas during the time I spent there, and the twenty or more individuals taken form an interesting series, being in the moult and showing the change from the winter to the breeding plumage. Dr. Goodman took two of these birds on Garden Key on April 24 and 26.

70. *Dendroica palmarum hypochrysea*. YELLOW PALM WARBLER.—Two males taken March 22 and March 31, I refer to this subspecies. These are all the records I have obtained.

71. *Dendroica discolor*. PRAIRIE WARBLER.—During my stay these birds were not uncommon, being noted almost daily, and sometimes as many as half a dozen were seen at the same time.

72. *Seiurus auropellus*. OVENBIRD.—This bird was not common at the Tortugas, but two or three being secured or observed. Dr. Goodman obtained a single bird as late as April 21.

73. *Seiurus noveboracensis*. WATER-THRUSH.—Dr. Goodman obtained single representatives of this species on April 25 and May 2.

74. *Seiurus noveboracensis notabilis*. GRINNELL'S WATER-THRUSH.—Two Water-thrushes, a female March 26, and a male March 28, I refer to this well-marked subspecies. These were all the Water-thrushes I obtained at the Tortugas.

75. *Geothlypis formosa*. KENTUCKY WARBLER.—On March 29 I took an adult male, which is, so far as I am aware, the second record of the species in Florida.

76. *Geothlypis trichas*. MARYLAND YELLOW-THROAT.—A female was taken on March 21 and a male, on April 7. These are all the records from this group save a single bird taken by Dr. Goodman on April 26.

77. *Sylvania mitrata*. HOODED WARBLER.—This species was more or less common during my stay. On March 23 I took four and saw three others, and almost every day a single bird was seen or taken. Dr. Goodman obtained them as late as April 14.

78. *Setophaga ruticilla*. AMERICAN REDSTART.—Two males were taken during my stay, one on March 30 and one on April 5. Dr. Goodman found them to be quite common during the last week in April and up to May 2.

79. *Galeoscoptes carolinensis*. CATBIRD.—This species was not common during my stay, and only two were secured and no others noted. But Dr. Goodman found them rather abundant during the last week in April and the early part of May.

80. *Poliophtila cærulea*. BLUE-GRAY GNATCATCHER.—Never very common, but met with several times, generally in pairs. Perhaps ten in all were seen.